

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/064341 A3

(51) International Patent Classification⁷: **G01N 33/573**,
C12N 9/16

(21) International Application Number:
PCT/EP2004/014814

(22) International Filing Date:
28 December 2004 (28.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03380310.7 30 December 2003 (30.12.2003) EP

(71) Applicants (*for all designated States except US*):
PROGENIKA BIOPHARMA, S.A. [ES/ES]; Parque
Tecnológico de Zamudio, Ibaizabal Bidea - Edificio 801 -
A 2ª planta, E-48160 DERIO - Vizcaya (ES). **UNIVER-**
SIDAD DEL PAÍS VASCO [ES/ES]; Rectorado, Barrio
Sarriena, s/n, 48940 Leioa-Vizcaya (ES).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **ARIZ LÓPEZ DE**
CASTRO, Usúe [ES/ES]; Parque Tecnológico de Zamu-
dio, Edificio 801, E-48160 DERIO - Vizcaya (ES). **OS-**
ABA ORTIZ DE MENDIBIL, Lourdes [ES/ES]; Parque
Tecnológico de Zamudio, Edificio 801, E-48160 DERIO -
Vizcaya (ES). **JUNQUERA SÁNCHEZ-VALLEJO**, Co-
rina [ES/ES]; Parque Tecnológico de Zamudio, Edificio
801, E-48160 DERIO - Vizcaya (ES). **OCHOA GARAY**,
Jorge [ES/ES]; Parque Tecnológico de Zamudio, Edificio

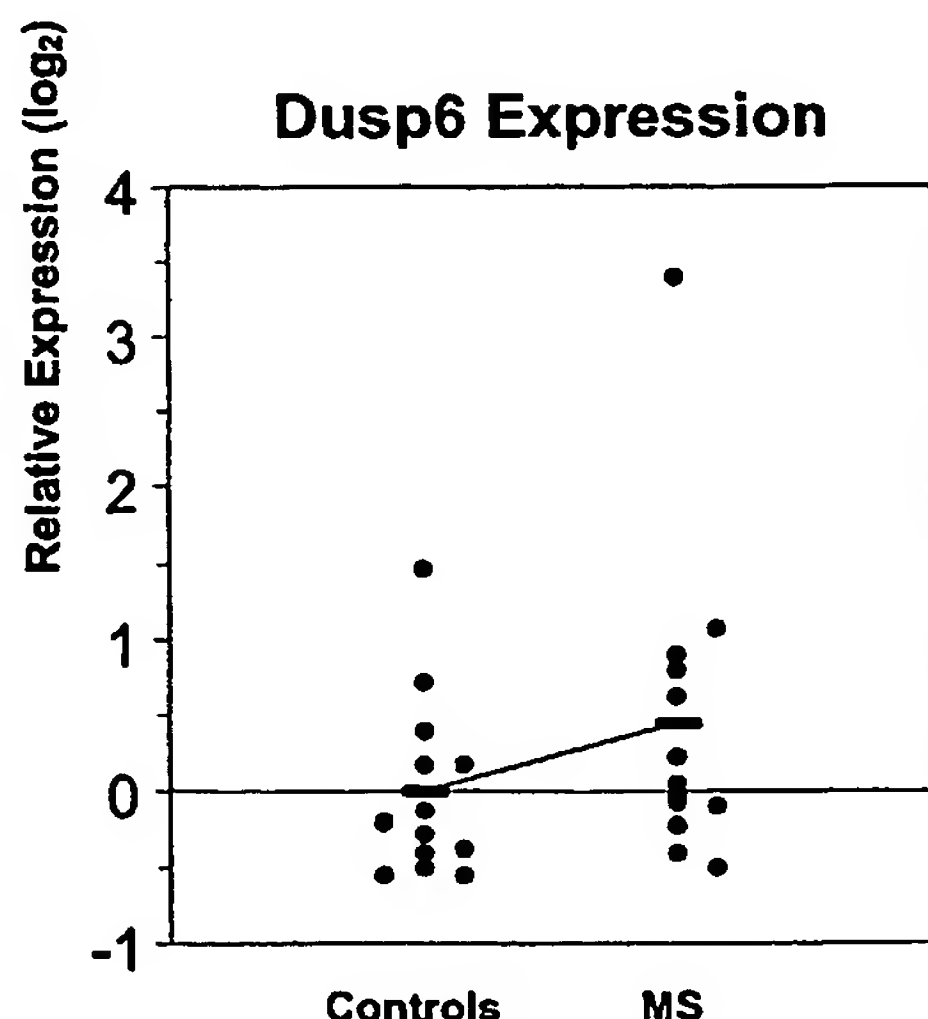
801, E-48160 DERIO - Vizcaya (ES). **ESCUDERO**
GARCÍA DE GALDEANO, Pedro [ES/ES]; Parque
Tecnológico de Zamudio, Edificio 801, E-48160 DERIO
- Vizcaya (ES). **SANTA CRUZ**, Simon [ES/ES]; Parque
Tecnológico de Zamudio, Edificio 801, E-4160 DERIO
- Vizcaya (ES). **SIMÓN BUELA**, Laureano [ES/ES];
Parque Tecnológico de Zamudio, Edificio 801, E-48160
DERIO - Vizcaya (ES). **MARTÍNEZ MARTÍNEZ**,
Antonio [ES/ES]; Parque Tecnológico de Zamudio, Ed-
ificio 801, E-48160 DERIO - Vizcaya (ES). **MATUTE**
ALMAU, Carlos [ES/ES]; Universidad del País Vasco,
E-48940 LEIOA - Vizcaya (ES). **DOMERCQ GARCÍA**,
María [ES/ES]; Universidad del País Vasco, E-48940
LEIOA - Vizcaya (ES). **ALBERDI ALFONSO**, Elena
[ES/ES]; Universidad del País Vasco, E-48940 LEIOA
- Vizcaya (ES). **SÁNCHEZ GÓMEZ**, María Victoria
[ES/ES]; Universidad del País Vasco, E-48940 LEIOA -
Vizcaya (ES). **VALLEJO ILLARRAMENDI**, Ainara
[ES/ES]; Universidad del País Vasco, E-48940 LEIOA -
Vizcaya (ES). **IBARRETXE BILBAO**, Gaskon [ES/ES];
Universidad del País Vasco, E-48940 LEIOA - Vizcaya
(ES). **ETXEBARRIA GALNARES**, Estibaliz [ES/ES];
Universidad del País Vasco, E-48940 LEIOA - Vizcaya
(ES).

(74) Agent: **ARIAS SANZ**, Juan; ABG Patentes, S.L., Orense,
68, 7th floor, E-28020 Madrid (ES).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

[Continued on next page]

(54) Title: METHODS FOR THE IN VITRO DIAGNOSIS AND IN VITRO PROGNOSIS OF DEMYELINATING DISEASES,
AND FOR THE DEVELOPMENT OF DRUGS AGAINST DEMYELINATING DISEASES



(57) Abstract: The present invention refers to an in vitro method for de-
tecting the presence of demyelinating diseases in an individual, for de-
termining the stage or severity of said diseases in the individual, or for
monitoring the effect of the therapy administered to an individual suffer-
ing said diseases; to the search, identification, development and evaluation
of efficacy of compounds for therapy of said diseases for the purpose of
developing new drugs; as well as to agents inhibiting DUSP6 protein ex-
pression and/or activity, and/or the effects of this expression. The methods
and agents of the invention are preferably applied to multiple sclerosis.



CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

(88) **Date of publication of the international search report:**

11 August 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.